

Work Order ID 133505

133505

Page 1

Monday, June 08, 2015 4:12:54 PM

Item ID: D6104-003

Accept

N900040100

Setup Start *NS1*

Revision ID:

Item Name: Round Billet, 17-4

Stop *NS2*

Start Date: 6/08/15 Start Qty: 400

Cust Item ID:

Required Date: 6/08/15 Req'd Qty: 400

Customer:

Reference:

Approvals: Process Plan: MLJ Date: JUN 10 2015 Tooling: _____ Date: _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D6104	Rev B

100 0.00

100

PURCHASING

Purchasing

Memo

0.00

Purchasing

Issue P/O: 28806 a) Description: S.S round billet b) Ø3.25" x 3.80" long c) Tolerance on all dimensions are +0.030"/-0.000" d) Material: 17-4PH Stainless steel (Ams 5643 or Aisi 630) e) One blank makes 2 parts f) Material certification required

CL JUN 12 2015 20

110

Receive & Inspect for Damage & Mat'l Certs 0.00

110

Packaging

Memo

0.00

Packaging

Ensure material certification is attached

20 JUN 18 2015 20 DAS 6 9-89

120

QC6- Inspect dimensions to drawing 0.00

120

QC

Memo

0.00

Quality Control

Ensure Material certification comply to Dwg D6104

20 DAS 14 9-89 15/06/22

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																	
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Page 2

Monday, June 08, 2015 4:12:54 PM

Item ID: D6104-003 Accept *N900040100* Setup Start *NS1*

Revision ID: Stop *NS2*

Item Name: Round Billet, 17-4

Start Date: 6/08/15 Start Qty: 4.00 *4* Cust Item ID:

Required Date: 6/08/15 Req'd Qty: 4.00 *4* Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Identify as per dwg & Stock Location: <u>MAT 43</u>	0.00							DAS 14 9-89
130						20			15706/22
Packaging	Memo	0.00							
Packaging	LOCATION: MAT043								
140	QC21- Final Inspection - Work Order Release	0.00							JUN 2 2 2015
140						ML5			
QC	Memo	0.00							
Quality Control									

ML5 JUN 2 2 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

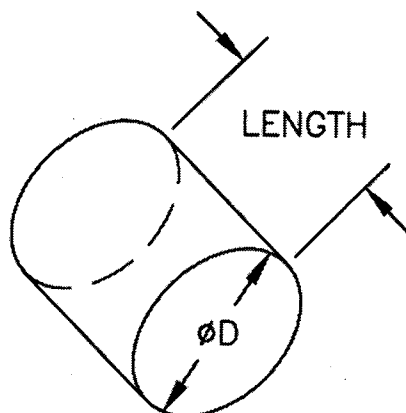
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DESIGN <i>RT</i>	DRAWN BY <i>[Signature]</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D6104	Rev. B SHEET 1 OF 1
DATE 02.11.25		TITLE ROUND BILLET, 17-4	SCALE NTS
A	01.04.10	NEW ISSUE	
B	02.11.25	CLARIFY ALLOY SPEC ADDED D6104-009/-011 REDUCE LENGTH OF BILLETS	

RELEASED
02.11.29 *[Signature]*

SPECIFICATION CONTROL DRAWING



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 133505.MLS
15-06-10

MATERIAL: 17-4 PH SS (AMS 5643 OR AISI 630) MIN UTS = 170 KSI (38 HRc)

PURCHASE MATERIAL ACCORDING TO THE FOLLOWING TABLE. SPECIFY ALLOY, DIAMETER x LENGTH (+0.030/-0.000) AS SHOWN.

TOLERANCE ON ALL DIMENSIONS IS +0.030/-0.000.

ALL DIMENSIONS ARE IN INCHES

Part No.	Alloy	D (Diameter)	Length
D6104-001	17-4 PH STAINLESS STEEL	Ø3.00	3.80
D6104-003	17-4 PH STAINLESS STEEL	Ø3.25	3.80
D6104-005	17-4 PH STAINLESS STEEL	Ø4.00	5.10
D6104-007	17-4 PH STAINLESS STEEL	Ø4.50	5.10
D6104-009	17-4 PH STAINLESS STEEL	Ø5.25	4.10
D6104-011	17-4 PH STAINLESS STEEL	Ø6.50	4.10

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**Castle Metals®**

A. M. Castle & Co.

PACKING SLIP/
CERTIFICATE OF CONFORMANCE

Page 1 of 1

Shipment No:2637828

Ship From: A. M. Castle & Co. (Canada) Inc. MONTREAL - CASTLE METALS 835-SELKIRK AVENUE POINTE CLAIRE, QUEBEC H9R 3S2		Sold To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA		Ship To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CAN		Deliver To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	
Date Shipped	F.O.B.	Freight Terms		Carrier		BOL No	
17-JUN-2015	ORIGIN	Prepaid		MANITOULIN		2637828-2	

Shipment Details	Final Destination Branch - MON
-------------------------	---------------------------------------

Order No	Line No	Item No	Description				
3925123	1	42470 MO	3.2500.RD.17CR-4NI.STAINLESS.RT.SOL TR.COND A.132.0000-156.0000 CUT TO 3.8 IN (+ .0620/- .0000 IN) - BAND SAW CUTTING SPECIFICATIONS: AMS 5643				
Purchase Order No		Part Number		Ordered Qty		Invoice Qty	
28806		YOUR ITEM NUMBER: D6104-003		20.00 PCS		20.00 PCS	
Details		ALL PAPERWORK MUST FOLLOW ORDER / CUSTOMER MUST RECEIVE AT TIME OF DELIVERY ALL MATERIAL MUST HAVE IDENTIFYING MARKINGS EX:HEAT #'S END USER: DART AEROSPACE END USE: COMMERCIAL AIRCRAFT PARTS ark 15/06/22					
Delivery No.	Mill	Heat Number	Mech Id	PCS	Width (IN)	Length (IN)	Shipped Qty(LBS)
120089634	VALBRUNA CORPORATION			20			178.6655

These commodities/technologies are subject to US Export Administration & US State Dept. Regulations and, if intended for export, were/are exported thereunder. Diversion contrary to US Law is Prohibited.

We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived. This is made in writing to A.M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned for credit.

Reviewed by Authorized Castle Metals Representative:

17 JUN 2015

Name:

These commodities, technology or software were exported from the United States in accordance with the Export Administration Regulations. Diversion contrary to US law prohibited.
Date Printed: 17-JUN-2015 09:13:03 AM

**VALBRUNA**

SLATER STAINLESS, INC.

2400 TAYLOR STREET WEST - PO BOX 630
PORT WATNE IN 46802 USA
PHONE 260.434.2800 - FAX 260.434.2801**Product Certification Report**Report Number: **5001110**

Certified on May 13, 2014 Page 1 of 2

Order I.D. 1400969 002		Order Date 4/04/14		Commodity Code 6303.25RT	
Dim 1 3.2500	Dim 2 .0000	Dim 3 .0000	Heat I.D. 262281	Customer I.D. 002476	Customer Purchase Order 403004704
Product Shape Rounds			Product Surface HR & Rough Turned		Customer Grade 17-4
Length (Inches) 132.000 Min. 156.000 Max.			Bill of Lading # 421805	Weight	

Ship
To
VALBRUNA CANADA LTD.
8724 HOLGATE CRESCENT
MILTON, ONTARIO L9T5Z1
DAS
14
9-89
Sold
To
VALBRUNA CANADA LTD.
8724 HOLGATE CRESCENT
MILTON, ONTARIO L9T5Z1
Lifts: 0084
AISI 630
UNS S17400
AMS 2303F
Condition A
ASTMA 564-13
AMS 5643T (except finish)
3174-10 Rev 18
ASMESA 564 13
CHEMICAL ANALYSIS

C	Mn	P	S	Si	Cr	Ni	Mo	Cu	N	Cb	Ta	Cb+Ta
.038	.57	.024	.020	.45	15.81	4.40	.21	3.18	.03	.27	.001	.271

BRINELL HARDNESS ASTM E10-12
HBW
357
TENSILE PROPERTIES ASTM E8-13a
CAPABILITY

Cap HB	TS (PSI)	.2%YS (PSI)	%EL(4d)	%RA	AGE(F)
427	204000	186000	15.5	54.2	900

MAGNETIC PARTICLE TEST AMS2303
FREQ SEV
AVG .10 .19
MACRO ASTM E340-00/E381-01
MACRO
OK
OK
OK
GRAIN SIZE ASTM E112-10

GRAIN SIZE	Etchant	Magnification X
6	Marbles	100

PERCENT FERRITE (AMS 2315)

% FERRITE	Etchant	Magnification X
AVG .3	Marbles	100

No welding or weld repair done.

Material when shipped is free from contamination by mercury, radium, alpha source, and low melting elements.

Reduction Ratio Exceeds 4:1

Electric Furnace melted; AOD refined.

Chemical testing to one or more of the listed ASTM methods:

E415-08, E572-02a, E1019-11, E1085-95, E1086-08.

Results relate only to the items tested. Certification shall not be reproduced except in full, without written approval of Valbruna Stainless Inc. The recording of false, fictitious, or fraudulent statements on this document may be punished as a felony under federal statutes. Including Federal law Title 18, Chapter 47. Consult material safety data sheet (MSDS) for hazard info.

I hereby certify that the reported figures are correct as contained in the records of the corporation.

Manager Laboratory Services

email: DHackett@valbruna.us

Dennis Hackett

**VALBRUNA**

SLATER STAINLESS, INC.

2400 TAYLOR STREET WEST - PO BOX 630
FORT WAYNE IN 46802 USA
PHONE 260.434.2800 - FAX 260.434.2801**Product Certification Report**Report Number: **5001110**

Certified on May 13, 2014 Page 2 of 2

Order I.D.	Order Date	Commodity Code
1400969 002	4/04/14	6303.25RT
Dim 1	Dim 2	Dim 3
3.2500	.0000	.0000
Heat I.D.	Customer I.D.	Customer Purchase Order
262281	002476	403004704
Product Shape	Product Surface	Customer Grade
Rounds	HR & Rough Turned	17-4
Length (Inches)	Bill of Lading #	Weight
132.000 Min. 156.000 Max.	421805	

**Ship
To**VALBRUNA CANADA LTD.
8724 HOLGATE CRESCENT
MILTON, ONTARIO L9T5Z1**Sold
To**VALBRUNA CANADA LTD.
8724 HOLGATE CRESCENT
MILTON, ONTARIO L9T5Z1

Location of tensile fracture: Inside gage length.

Chemical Analysis performed at Acciaierie Valbruna, Italy.

No mercury or low melting alloy contamination. No weld repair.

Material melted in Italy, manufactured in the United States.

Material conforms to listed specifications and is DFARS compliant.

Quality system is compliant with ISO 9001:2008. Produced in accordance with EN 10204 3.1.DAS/5/06/22
14
8-88

Results relate only to the items tested. Certification shall not be reproduced except in full, without written approval of Valbruna Stainless Inc. The recording of false, fictitious, or fraudulent statements on this document may be punished as a felony under federal statutes. Including Federal law Title 18, Chapter 47. Consult material safety data sheet (MSDS) for hazard info. I hereby certify that the reported figures are correct as contained in the records of the corporation.

Manager Laboratory Services

email: DHackett@valbruna.us

Dennis Hackett

BON DE CONNAISSANCE NOMINATIF ABRÉGÉ - ORIGINAL - NON NÉGOCIABLE STRAIGHT BILL OF LADING - SHORT FORM - ORIGINAL - NOT NEGOTIABLE REÇU. Sujet aux classifications et tarifs en vigueur à la date d'émission du présent bon de connaissance RECEIVED. Subject to the classification and tariffs in effect on the date of issue of this Bill of Lading Le bien décrit plus bas, en bon état apparent, exception faite comme noté (le contenu et la condition du contenu de l'emballage inconnus), marqué, consigné et destiné comme indiqué ci-après, que le dit transporteur (le mot « transporteur » signifiant dans ce contrat toute personne ou société en possession du bien en vertu de ce contrat) accepte de le transporter à l'endroit habituel de livraison de ladite destination, si sur sa route, ou sinon de le livrer à un autre transporteur en route vers ladite destination. Il est mutuellement accepté, par chacun des transporteurs de toute ou n'importe quel dit bien, en totalité ou en partie de la route à destination, et par chaque partie intéressée par la totalité ou n'importe quelle partie du bien à n'importe quel moment, que chaque service à être exécuté tel que décrit ci-après est sujet à toutes les modalités et conditions générales du bon de connaissance nominatif « Uniform Domestic Straight Bill of Lading » présenté (1) dans la Classification uniforme de transport en vigueur à la date des présentes, s'il s'agit d'une expédition par voie ferroviaire ou par voie marine, ou (2) dans la classification ou le tarif applicable au transporteur motorisé s'il s'agit d'une expédition par véhicule motorisé. The property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated below, which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed, as to each carrier of all or any said property over all or any portion of said route to destination, and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Uniform Freight Classification in effect on the date hereof, if this is a rail or water shipment, or (2) in the applicable motor carrier classification or tariff this is a motor carrier shipment.		No du livreur / Shipper No.: 2637828-2 De - A / FROM AT: A. M. Castle & Co. (Canada) Inc. 835-SELKIRK AVENUE POINTE CLAIRE QC H9R 3S2 CAN d expédition / Ship Date: 17-JUN-2015 MANITOULIN TRANSPORT 1-800-265-1485  2 2 2 1 7 6 2 3
Consigné à / Consigned To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY ON K6A 1K7 CAN	Directives de livraison / Delivery Instructions: TOUS LES CHARGEMENT DOIVENT ÊTRE COUVERT. LA LISTE D'EMBALAGE DE LIVRAISON ET LES RAPPORTS DE TEST OU CONSIGNATAIRES REFUSERONT. ALL LOADS MUST BE TARPED. DELIVER PACKING LIST AND TEST REPORTS OR CONSIGNEE WILL REFUSE.	Modalités de paiement / Payment Terms: Prepaid REMETTRE LES FACTURES DE TRANSPORT À / REMIT FREIGHT INVOICES TO: RayTrans Management, Inc. PO Box 1210 Washington PA 15301
Nom du Transporteur / Carrier Name: MANITOULIN	Couverture d'assurance additionnelle / Additional Insurance Coverage: La valeur acceptée ou déclarée de la propriété ci bas spécifiée par le transporteur n'excède pas : The agreed or declare value for the property is hereby specifically stated by the shipper to be not exceeding: _____ par / per _____	

Détail de livraison / Shipment Breakdown:

Quantité / Quantity	Emballage / Packaging	Classe / Class	Commodity
1	BUNDLE	FAK 50	Metal Product

Poids du Chargement / Shipment Weights:

Produit / Product	179 LBS
Dunnage	0 LBS
Gross	179 LBS

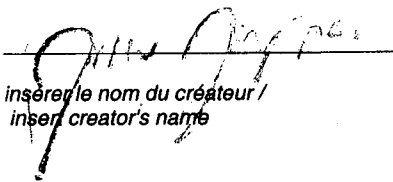
ORDER DETAILS

Bon de commande du client / Customer PO	No de commande du client / Sales Order No.	No de ligne / Line No.	No. d'Item Castle / Castle Item No.	Quantité livrée / Quantity Shipped	Castle UOM
28806	3925123	1	3925123*1*1*317266087	20	PCS

Sujet à la section 7 des Conditions générales du Bon de connaissance applicable. Si cette expédition est livrée au consignataire sans recourir à l'expéditeur, l'expéditeur doit signer les déclarations suivantes. Subject to Section 7 of Conditions of applicable bill of Lading. If this shipment is to be delivered to the consignee without recourse to the consignor, the consignor shall sign the following statements. Le transporteur ne doit pas livrer ce chargement sans avoir acquitté les frais de transport et les charges légales. The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges. CETTE EXPÉDITION DOIT ÊTRE REÇUE ET TRANSPORTÉE CONFORMÉMENT À TOUTES LES MODALITÉS ET CONDITIONS GÉNÉRALES DU BON DE CONNAISSANCE COMPAGNIES DE NAVIGATION. THIS SHIPMENT IS TO BE TENDER RECEIVED AND TO BE CARRIED SUBJECT TO ALL TERMS AND CONDITIONS OF THE STEAMSHIP COMPANIES CURRENT FORM BILL OF LADING CE DOCUMENT CERTIFIE QUE LES ARTICLES MENTIONNÉS CI-DESSUS SONT PROPREMENT CLASSIFIÉS, DÉCRITS, EMBALLÉS, MARQUÉS ET IDENTIFIÉS, ET SONT EN ÉTAT D'ÊTRE TRANSPORTÉS CONFORMÉMENT AUX RÈGLEMENTS DU MINISTÈRE DES TRANSPORTS. THIS IS TO CERTIFY THAT THE ABOVE NAMED ARTICLES ARE PROPERLY CLASSIFIED, DESCRIBED, PACKAGED, MARKED AND LABELED, AND ARE IN PROPER CONDITION FOR TRANSPORTATION ACCORDING TO THE APPLICABLE REGULATIONS OF THE DEPARTMENT OF TRANSPORTATION.	Si l'expédition se déplace entre deux ports par un transporteur par voie maritime, la loi exige que le bon de connaissance stipule s'il s'agit « du poids du transporteur ou de l'expéditeur ». NOTE: Là où la charge est en fonction de la valeur, les expéditeurs doivent déclarer spécifiquement par écrit la valeur du bien acceptée ou déclarée. If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading shall state whether it is "carrier's or shipper's weight." NOTE: Where the rate is dependent on value, the shippers are required to state specifically in writing the agreed or declared value of the property. L'expéditeur déclare spécifiquement que la valeur acceptée ou déclarée du bien ne dépasse pas. The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding Le client est responsable de tous les documents d'expédition et de se conformer à toutes les lois canadiennes et américaines incluant, mais sans s'y limiter, les lois et règlements américains et canadiens relatifs à l'exportation. Customer is responsible for all shipping documents and compliance with United States and Canadian laws, including but not limited to U.S. and Canadian Export laws and regulations.
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Belley 17/6/15 - 64801

EXPÉDITEUR - PAR /
SHIPPER, PER:


insérer le nom du créateur /
insert creator's name

Par /
Per

Signature du conducteur / Date

Driver's Signature

PREUVE DE LIVRAISON /
PROOF OF DELIVERY:

Signature / Date

Name

Please Print Name Here

Toutes les pages doivent être signées/ All pages must be signed

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: D6104-003
 DATE: 15/06/22

PO / BATCH NO.: 28806/133505

MATERIAL CERT REC'D: yes
 QUANTITY RECEIVED: 20
 QUANTITY INSPECTED: 20
 QUANTITY REJECTED: _____

THICKNESS ORDERED: 03.25 X 3.80
 THICKNESS RECEIVED: 03.29 X 3.860
 SHEET SIZE ORDERED: _____
 SHEET SIZE RECEIVED: _____

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	☒	
CORRECT FINISH	☒	N	
CORROSION	Y	☒	
CORRECT GRAIN DIRECTION	☒	N	
CORRECT MATERIAL	☒	N	
CORRECT THICKNESS	☒	N	
PHOTO REQUIRED	Y	☒	
CORRECT MATERIAL	☒	N	
CORRECT REF # TO LINK CERT	☒	N	
CORRECT MATERIAL IDENTIFICATION	☒	N	
CORRECT M# ON THE MATERIAL	☒	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	☒	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	☒	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
TYPE OF MATERIAL SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING	HRC	HRB	DUR A	DUR D	

testers located in the Quality Office

QC-18 INSPECTION INSPECTED BY: <u>DAS 14</u> DATE: <u>15/06/22</u>	ENGINEERING SIGNOFF (if required) SIGNED OFF BY: _____ DATE: _____
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Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

MATERIAL RECEIPT INSPECTION FORM

INSTRUCTIONS FOR INSPECTING BAR, TUBING, ROUND, & SHEET STOCK

- 1- VERIFY STOCK TO DART PURCHASE ORDER
- 2- MEASURE ALL DIMENSIONS FOR EACH PURCHASED STOCK
 - a. WIDTH, THICKNESS, DIAMETER, WALL THICKNESS & LENGTH
- 3- VERIFY CONDITION OF MATERIAL i.e. DAMAGED, CORRODED, etc.
- 4- VERIFY THAT SUPPLIER HAS A NUMBER (HEAT #) ON ITS RECEIVING REPORT TO LINK TO MATERIAL CERTS
- 5- VERIFY MATERIAL CERTS ARE CORECT TO THE DART PO INSTRUCTIONS
- 6- REMOVE / CUT A PIECE OF MATERIAL FOR SAMPLE HARDNESS TESTING

INSTRUCTIONS FOR INSPECTING SKIDTUBE & STEP EXTRUSION

- 1- VERIFY TO DART SUPPLIED DRAWING
- 2- SAMPLE INSPECT MATERIAL IN BUNDLE TO ENSURE MATERIAL CAN BE RECEIVED INTO DART
- 3- USING PORTABLE HARDNESS TESTER VERIFY HARDNESS OF THE MATERIAL TO THE DRAWING
- 4- VERIFY THAT MATERIAL CERTS MATCH TO WHATS CALLED UP ON THE DART DRAWING

AFTER MATERIAL PASSES INSPECTION

- 5- HAVE DART EMPLOYEES START STOCKING MATERIAL BUT REQUEST MIN **20pcs** FOR FULL INSPECTION
- 6- INSPECT ALL DIMS AS PER DRAWING REQUIRMENTS

INSTRUCTIONS FOR INSPECTING CROSS TUBE MATERIAL

- 1- VERIFY MATERIAL CERTS MATCH THE REQUIRMENTS ON THE DART DRAWINGS
- 2- INSPECT MIN. HALF THE BATCH OF EXTRUSION RECEIVED INTO DART
- 3- INSPECT MATERIAL AS PER THE EXTRUSION REPORT
 - a. WALL THICKNESS USING ULTRA-SONIC IN 4 LOCATIONS
 - b. OUTSIDE DIAMETETER HIGHEST/LOWEST BOTH ENDS
 - c. INSIDE DIAMETER HIGHEST/LOWEST BOTH ENDS
 - d. STRAIGHTNESS @ CENTER OVER 12" SPAN
 - e. WALL THICKNESS USING TUBE MICROMETER HIGHEST/LOWEST BOTH ENDS
- 4- IDENTFY EACH TUBE IN SEQUENCE OF INSPECTING (TUBE 1, TUBE2.....) AND W/O# AND PO#
- 5- RECORD ALL FINDINGS ON EXTRUSION REPORT

IF ANY QUESTIONS PLEASE SEE QC CORRDIRATOR BEFORE GOING FURTHER